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U S EPA REGION IV RESPONSE TO TECHNICAL COMMENTS FOR SITE 2 OPERABLE UNIT 3 (OU3) WATERFRONT SEDIMENTS NAS PENSACOLA FL
8/12/2004
U S EPA REGION IV

Response to Technical Comments
Environmental Protection Agency
Site 2 (Operable Unit 3), Waterfront Sediments, NAS Pensacola
Dated August 12, 2004

The Site 2 Draft Focused Feasibility Study Report Addendum was revised following consideration of the cited EPA and NOAA review comments. The following text explains the explicit changes made to address the reviewers' comments. Additional changes follow these. The report was modified for consistency. Non-substantive changes are not explicitly referenced in this document.

EPA SPECIFIC COMMENTS:

Comment 1: Section 1.2, Page 1-4, Paragraph 3.
Text states, "the sampling stations were based on the same transect system originally established for this site." It would be helpful to discuss this system. Please include how each 150 square foot sampling box in the corresponding Figure 1-3 is represented, what the numbering inside each box represents, and where the sample within the box is taken, i.e., if it was in the center or at a random location within the box. Furthermore, note where the 2000 sampling was taken with respect to the hot spots found in previous 1996 sampling, shown in the Figure 1-2.

Response:
The following modifications were made to the figures:
Added the 1996 samples F3, H1, H3, and I0 from Figure 1-2 to Figure 1-3.

Figure 1-4 shows where samples were proposed to be collected within each grid cell and how this correlates with the 1996 "hot spot" contamination. This figure is shown in Appendix A of the Final RI Addendum, p. 221/708 of "Final RI Report Addendum Site 2 with Errata Pages.pdf" under "Post-RI Sampling and Analysis Plan, Site 2 NAS Pensacola.

The following text was added to the document:
"A sampling grid was established to assess sediment contamination near the Site 2 "hot spot" contamination (i.e., samples F3, H1, H3, and I0) identified in 1996, which is shown in Figure 1-2. Eight decision units (DUs; DU01 to DU08) were established covering the central area beginning at the seawall adjacent to the location of former Building 71 and extending offshore to the southeast. Three additional DUs (DU09 to DU11) were established to delineate potential contamination to the west, south, and east. The Site 2 decision units (DU01 to DU11) are shown in Figure 1-3. These decision units were defined using the transect system originally established for the site. As shown in Figure 1-3, the original, irregular sampling grid consists of 100-foot spaced parallel north-south, lettered transects and 100-foot interval transects parallel to the shoreline. The sampled grid cells are named based on this grid, but are established as 150-foot square DUs. The nomenclature for the sample grid cells are based on the grid location (e.g., GH-34 intersects transects G, H, 300-ft, and 400-ft) and are referred to as station numbers (e.g., USEPA Station 4) or decision units (e.g., DU04).

Three surface sediment samples (0 to 6 inches) were collected by divers from each DU – from the southwest corner, the center, and the northeast corner. Corner samples were shared for DU02 and DU03, DU04 and DU06, and DU08 and DU11. Chemical samples were prepared as 3-point composite samples for each DU, whereas biological samples were prepared as undisturbed grab samples. A single subsurface sediment sample (6- to 36-in) was attempted from the center of each DU. Subsurface samples were not collected in DU02, DU06, DU07, DU08, and DU10 because of core-sampler refusal. The March 2000 sample locations proposed in the sampling and analysis plan are shown in Figure 1-4. The sediment samples collected in 2000 were collected as composite samples for the sampling grid and therefore are not directly comparable with the grab samples collected in 1996. Stations 18 and 22, which are approximately 2,500 feet southeast and 15,000 feet northeast of Site 2 respectively, were sampled as offsite controls. Sediment sampling details are provided in *Final Report, Pensacola Naval Air Station, Sediment Survey, Operable Unit 3* (USEPA, 2001)."

Comment 2: <u>Section 1.2.1, Page 1-7, Paragraph 1</u>.
Text notes the presence of contamination in only 2 of 11 DUs sampled, and references the Figure 1-3. The locations of these contaminated DUs are not shown in Figure 1-3, but are identified in Figure 1-4. Please change text to reference Figure 1-4 instead.

Response:
The reference was changed from Figure 1-3 to Figure 1-5 (incremented because of the addition of Figure 1-4). DU08 and DU11 were specifically cited. This sentence was moved from the bottom of the first paragraph of Section 1.2.1 to the top of the last paragraph of Section 1.2.1.

Comment 3: <u>Section 1.2.1, Page 1-8, Paragraph 1</u>.
Text discusses the "weight of evidence" used to evaluate each station. As this approach seems rather vague, please discuss how this is used and define the criteria. Furthermore, the determination of the "condition (1-6)" for each 150 square foot section is not explained clearly. Again, discuss the criteria used.

Response:
Section 1.2.1 was rewritten to clarify the SQT approach. Table 1-1 was added, which summarizes the interpretations of Conditions 1 to 8.

Comment 4: <u>Section 1.3.1, Page 1-11, Paragraph 2</u>.
Text mentions Site 38. Please Identify in a figure the proximity of this site to site 2.

Response:
In the opening sentence of the second paragraph of Section 1.3.1, a statement was added that Site 38 is adjacent to Site 2 to the north. In the same paragraph, a statement was added that the location of former Bldg 71 is shown in Figure 1-3.

Comment 5: Section 3.2.1, Page 3-7, Paragraph 1.
The text discusses the No Action alternative and the natural attenuation anticipated. Please note whether there is an estimated time frame for this process to occur, based on surrounding conditions.

Response:
On page 3-7, the following text was added:
"Although there is insufficient data to estimate natural attenuation rates, the AVS/SEM analyses indicate that metals are not bioavailable in DU08 but are bioavailable in DU11."

Comment 6: Section 3.2.1, Page 3-9, Paragraph 3.
Community acceptance section should be rewritten to state "The status of community acceptance for Alternative 1 will be established after the public comment period for the FFSA."

Response:
The text was revised to state "The status of community acceptance for Alternative 1 will be established after the public comment period for the FFSA."

Comment 7: Section 3.2.2, Page 3-9, Paragraph 3.
Long term effectiveness of capping certainly depends on the maintenance of the capping material. Appendix B cost analysis indicates re-capping every 10 years. This should be noted in text.

Response:
Three sentences were added to the following paragraph. The first sentence addresses consolidation, whereas the last two sentences specifically address the reviewer's comments. The cost implications of refurbishment are already addressed in the 3.2.2 cost section.

On page 3-9, the following paragraph was modified to:
"Consolidation of the cap would be expected to be minimal because of the high sand content of the sediment and the coarse grain-size material specified for the cap. The cap may be eroded by wave action, high-velocity currents, propeller wash, and other physical wear. Although sufficient controls could be designed to prevent catastrophic erosion, the presence of fine-grained sediments at Site 2 indicates that this area is in a relatively low energy zone. The cap would be periodically inspected by collecting core samples and performing a hydrographic survey. In the event that sufficient erosion is detected, the emplacement of additional capping material may be required."

Comment 8: Section 3.2.2, Page 3-11, Paragraph 4.
Community acceptance section should be rewritten to state "The status of community acceptance for Alternative 2 will be established after the public comment period for the FFSA."

Response:
The text was revised to state "The status of community acceptance for Alternative 2 will be established after the public comment period for the FFSA."

Comment 9: Section 3.2.3, Page 3-13, Paragraph 1.
Please add a note in the Cost subsection to address what costs may be associated with liability of disposal waste.

Response:
On page 3-13, the following paragraph was amended to state:"The dredging and offsite disposal cost is detailed in Section 2.3.4. Based on a one-foot depth of removal and backfill, the estimated direct construction and disposal cost is $855,000. Dredged soils would be dewatered by filter press and presumably disposed as non-hazardous waste at a RCRA Subtitle D landfill. Excluding transportation, compliance sampling, and exempted taxes, the estimated direct cost for disposal is $98,800. No long-term O&M costs are associated with this alternative. The estimated fully-loaded cost for the capping and offsite disposal alternative is $1,283,000, which includes a 30% contingency."

Additional commentary not specifically addressed in the text
The presumed classification is non-hazardous, which has a unit disposal cost of $91.16/CY, in contrast to $144.20/CY for hazardous waste (ECHOS, 2001). An estimated 1,083 CY will be disposed. These unit costs are shown in Appendix B. Reclassification would also impact the transportation cost, which is estimated at 120 miles single-direction for non-hazardous waste.

Several other modifications were made relating to the cost estimates. The remaining Section 3 cost sections were amended for clarification and consistency. "Present worth" and "present-worth" were globally changed to "present value" in all sections of the document. "Net" was dropped from the "net present worth/value" term in Section 4 because "net" denotes the calculation of a benefit cash flow, which is not estimated.

Comment 10: Section 3.2.3, Page 3-13, Paragraph 5.
Community acceptance section should be rewritten to state "The status of community acceptance for Alternative 3 will be established after the public comment period for the FFSA."

Response:
The section was revised to state "The status of community acceptance for Alternative 4 will be established after the public comment period for the FFSA."

Comment 11: Section 3.2.4, Page 3-16, Paragraph 4.
Community acceptance section should be rewritten to state "The status of community acceptance for Alternative 4 will be established after the public comment period for the FFSA."

Response:
The section was revised to state "The status of community acceptance for Alternative 4 will be established after the public comment period for the FFSA."

Comment 12: Figure 1-3, Page 1-6.
Please include hot spot locations for contamination in the figure. It appears that the box edges for the DUs are at the location for 1996 sample hot spots, such that if the 2000 sample is taken from the center of the DU, the hotspot may not be repeated. Please discuss the strategy intended here in corresponding text. The figure also indicates that there is no sampling in the ship docking area. This could possibly be because the docking area is drudged regularly, but text should note that as well in the corresponding text.

Response:
Changes to figures:
Figure 1-2:
Added 1996 samples labels: A2, F3, H1, H3, and I0
Changed legend label from "HOT SPOT" to "HOT SPOT; DEFINED AS HAZARD INDEX > 10"

Figure 1-3:
Added the 1996 samples F3, H1, H3, and I0

On page 1-5, the following text was added:
"Three surface sediment samples (0- to 6-in) were collected by divers from each DU – from the southwest corner, the center, and the northeast corner. Corner samples were shared for DU02 and DU03, DU04 and DU06, and DU08 and DU11. Chemical samples were prepared as 3-point composite samples for each DU, whereas biological samples were prepared as undisturbed grab samples. A single subsurface sediment sample (6- to 36-in) was attempted from the center of each DU. Subsurface samples were not collected in DU02, DU06, DU07, DU08, and DU10 because of core-sampler refusal. The March 2000 sample locations proposed in the sampling and analysis plan are shown in Figure 1-4. The sediment samples collected in 2000 were collected as composite samples for the sampling grid and therefore are not directly comparable with the grab samples collected in 1996."

On page 1-4, the following text added:
"The March 2000 investigation, which is reported in the final RI Report Addendum (EnSafe, 2004), was conducted to determine if chemical constituents at Site 2 create adverse conditions for benthic communities. Because three hurricanes impacted the area after the 1996 sampling event, additional data were needed to assess the site conditions.

Sediment contamination near samples F3, H1, H3, and I0 appears to be localized as a result of a rotational flow pattern, as evidenced by the siltation and flow patterns described in the 1996 RI report (EnSafe/Allen & Hoshall, 1996). Sediment was not evaluated near sample A2. In the data quality objectives, sediment contamination near sample A2 was stated to probably be attributed to boat traffic and is probably not associated with Site 2 operations."

Comment 13: Table 1-2, Page 1-14.
The number of exceedences for each contaminant should be expressed as a fraction of samples tested for that analyte. The number of exceedences may have changed, from 1996 to 2000, but the fraction may indicate something different. Please either include a statement in the table notes for the number of samples for each concern group for each of the two years or split the number of exceedences column into two columns each expressing a fraction of the number of samples taken.

Response:
The table referenced in the comment has been deleted. The remedial goals developed in the RI Report Addendum have been summarized and are now included in the text.